TIRES AND WHEELS

Tire Pressure

Tire pressure should be checked and adjusted to maintain the smoothness of the tire, good traction and handling and to get the maximum life out of the tire. A simple, accurate gauge (Figure 1) can be purchased for a few dollars and should be carried in your tool box in the tow vehicle. The appropriate tire pressures and circumference measurements are shown in Table 2.

WARNING

Always inflate both rear tires to the same pressure. If the ATC is run with unequal air pressures it will cause poor handling.

CAUTION

Do not over-inflate the stock tires as they will be permanently distorted and damaged. If overinflated, they will bulge out similar to inflating an inner tube that is not within the constraints of a tire. If this happens the tire will not return to its original contour.

Tire Inspection

The tires take a lot of punishment due to the variety of terrain they are subject to. Inspect them periodically for excessive wear, cuts, abrasions, etc. If you find a nail or other object in the tire, mark its location with a light crayon prior to removing it. This will help locate the hole for repair. Refer to Chapter Eight for tire changing and repair information.

Rim Inspection

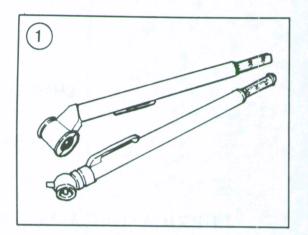
Frequently inspect the wheel rims, especially the outer side. If the wheel has hit a tree or large rock, rim damage may be sufficient to cause an air leak or knock it out of alignment. Improper wheel alignment can cause severe vibration and result in an unsafe riding condition.

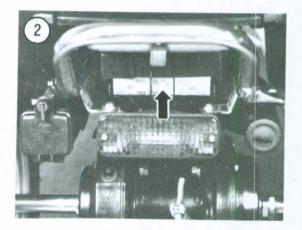
Make sure that the cotter pins are securely in place on all 3 wheels. If they are lost and the castellated nut works loose, it's good-bye wheel.

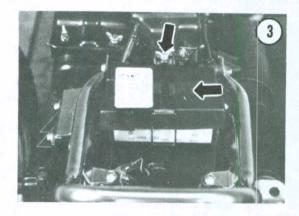
BATTERY (MODELS SO EQUIPPED)

Removal/Installation and Electrolyte Level Check

The battery is the heart of the electrical system. It should be checked and serviced as indicated in **Table 1**. The majority of electrical system troubles can be attributed to neglect of this vital component.

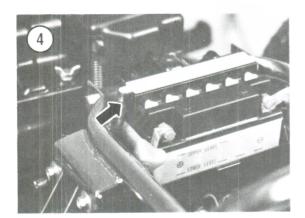


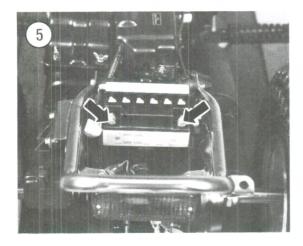


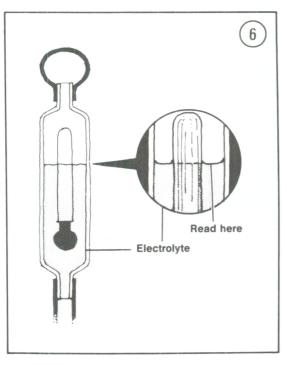


The electrolyte level may be checked with the battery installed in the frame and without removing any parts. Look directly over the taillight and observe the electrolyte level at the rear of the battery. The electrolyte level should be maintained between the 2 marks on the battery case (Figure 2).

If the electrolyte level is low, it's a good idea to remove the battery from the ATC so it can be thoroughly serviced and checked.







- 1. Remove the seat/rear fender assembly.
- 2. Unscrew the wing nut and remove the battery holder and cover (Figure 3).
- 3. Remove the vent tube (Figure 4) from the battery.
- 4. Disconnect the battery negative (-) and positive (+) leads from the battery (**Figure 5**).
- 5. Pull the battery up and out of its tray. Wipe off any of the highly corrosive residue that may have dripped from the battery during removal.

CAUTION

Be careful not to spill battery electrolyte on painted surfaces. The liquid is highly corrosive and will damage the finish. If it is spilled, wash it off immediately with soapy water and thoroughly rinse with clean water.

- 6. Remove the caps from the battery cells and add distilled water to correct the fluid level. Never add electrolyte (acid) to correct the level. Do not use ordinary tap water as it will shorten the service life of the battery.
- 7. After the fluid level has been corrected, gently shake the battery to mix the existing electrolyte with the new water and allow the battery to stand a few minutes.
- 8. Check the specific gravity of the electrolyte in each cell with a hydrometer (**Figure 6**) as described under *Testing* in this chapter.
- 9. After the battery has been refilled, recharged or replaced, install it by reversing these removal steps.

CAUTION

If the breather tube was moved during battery removal be sure to route it through the clips on the drive chain case so that residue from it will not drain onto any part of the ATC's frame. The tube must be free of bends or twists as any restriction may pressurize the battery and damage it.

Testing

Hydrometer testing is the best way to check battery condition. Use a hydrometer with numbered graduations from 1.100 to 1.300 rather than one with color-coded bands. To use the hydrometer, squeeze the rubber ball, insert the tip into the cell and release the pressure on the ball. Draw enough electrolyte to float the weighted float inside the hydrometer. Note the number in line with the surface of the electrolyte; this is the specific gravity for this cell. Squeeze the rubber ball again and return the electrolyte to the cell from which it came.

The specific gravity of the electrolyte in each battery cell is an excellent indication of that cell's condition. A fully charged cell will read 1.260-1.280, while a cell in acceptable condition reads from 1.230-1.250 and anything below 1.160 is discharged.

Specific gravity varies with temperature. For each 10° the electrolyte temperature exceeds 80° F (27° C), add 0.004 to readings indicated on the hydrometer. Subtract 0.004 for each 10° below 80° F (27° C).

If the cells test in the poor range, the battery requires recharging. The hydrometer is useful for checking the progress of the charging operation. **Table 3** shows approximate state of charge.

Charging

WARNING

During the charging process, highly explosive hydrogen gas is released from the battery. The battery should be charged only in a well-ventilated area and away from any open flames (including pilot lights on home gas appliances). Do not allow any smoking in the area. Never check the charge of the battery by arcing across the terminals; the resulting spark can ignite the hydrogen gas.

CAUTION

Always remove the battery from the vehicle before connecting the battery charger. Never recharge a battery in the ATC's frame due to the corrosive mist that is emitted during the charging process. If this mist settles on the frame it will damage it.

- 1. Connect the positive (+) charger lead to the positive (+) battery terminal (or lead) and the negative (-) charger lead to the negative (-) battery terminal (or lead).
- 2. Remove all vent caps from the battery, set the charger at 12 volts and switch the charger on. If the output of the charger is variable, it is best to select a low setting—1 1/2 to 2 amps.

CAUTION

The electrolyte level must be maintained at the upper level during the charging cycle; check and refill as necessary.

3. After the battery has been charged for about 8 hours, turn the charger off, disconnect the leads and check the specific gravity. It should be within the limits specified in **Table 3**. If it is, and remains stable for 1 hour, the battery is considered charged.

4. Clean the battery terminals, surrounding case and tray and reinstall them in the ATC, reversing the removal steps. Coat the battery terminals with Vaseline or silicone spray to retard corrosion and decomposition of the terminals.

CAUTION

Route the breather tube through the clips on the drive chain case so that it does not drain onto any part of the ATC's frame. The tube must be free of bends or twists as any restriction may pressurize the battery and damage it.

New Battery Installation

When replacing the old battery with a new one, be sure to charge it completely (specific gravity 1.260-1.280) before installing it in the ATC. Failure to do so, or using the battery with a low electrolyte level, will permanently damage the new battery.

PERIODIC LUBRICATION

Oil

Oil is graded according to its viscosity, which is an indication of how thick it is. The Society of Automotive Engineers (SAE) system distinguishes oil viscosity by numbers. Thick oils have higher viscosity numbers than thin oils. For example, an SAE 5 oil is a thin oil while an SAE 90 oil is relatively thick.

Grease

A good quality grease (preferably waterproof) should be used. Water does not wash grease off parts as easily as it washes off oil. In addition, grease maintains its lubricating qualities better than oil on long and strenuous rides. In a pinch, though, the wrong lubricant is better than none at all. Correct the situation as soon as possible.

Engine Oil Level Check

Engine oil level is checked with the dipstick/oil filler cap, located on the rear right-hand side of the engine behind the clutch mechanism cover (**Figure** 7).

- 1. Start the engine and let it warm up approximately 2-3 minutes. Shut off the engine and let the oil settle.
- 2. Place the ATC on a level surface.
- 3. Unscrew the dipstick/oil filler cap and wipe it clean. Reinsert it onto the threads in the hole; do not screw it in. Remove it and check the oil level. The ATC must be level for a correct reading.

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